

GFP

Cat.No. 132 003; Polyclonal rabbit antibody, 50 µg specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	50 µg specific antibody, lyophilized. Affinity purified with the immunogen. Albumin and azide were added for stabilization. For reconstitution add 50 µl H ₂ O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C to -80°C until use. Antibodies should be stored at +4°C when still lyophilized. Do not freeze! For detailed information, see back of the data sheet.
Applications	WB: 1 : 1000 up to 1 : 20000 (AP staining) IP: yes ICC: 1 : 500 IHC: 1 : 500 IHC_P: not tested yet
Immunogen	Recombinant protein corresponding to AA 1 to 238 from jellyfish GFP (UniProt Id: P42212)
Specificity	Recognizes GFP, mEGFP, superfolder GFP, most common CFP and YFP variants. Does not cross-react to mCherry, mRFP, dsRed, mTagBFP or their most common derivatives.

TO BE USED IN VITRO / FOR RESEARCH ONLY
NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Access the online factsheet including applicable protocols at <https://sysy.com/product/132003> or scan the QR-code.



Background

Green fluorescent protein **GFP** and its derivatives have become universal tools in cell biology. These antibodies allow immunoprecipitation and visualization of GFP fusion proteins on immunoblots and by immunocytochemistry.

Selected References for 132 003

Tyrosine phosphorylation regulates the endocytosis and surface expression of GluN3A-containing NMDA receptors. Chowdhury D, Marco S, Brooks IM, Zandueta A, Rao Y, Haucke V, Wesseling JF, Tavalin SJ, Pérez-Otaño I. *The Journal of neuroscience : the official journal of the Society for Neuroscience* (2013) 339: 4151-64. . **IP, ICC**

The catalytic function of the gephyrin-binding protein IQSEC3 regulates neurotransmitter-specific matching of pre- and postsynaptic structures in primary hippocampal cultures. Früh S, Tyagarajan SK, Campbell B, Bosshard G, Fritschy JM. *Journal of neurochemistry* (2018) . . **WB; tested species: rat**

Drosophila gene tao-1 encodes proteins with and without a Ste20 kinase domain that affect cytoskeletal architecture and cell migration differently. Pflanz R, Voigt A, Yakulov T, Jäckle H. *Open biology* (2015) 51: 140161. . **IHC**

Rescue of Normal Excitability in LGI1-Deficient Epileptic Neurons. Extrémet J, Ramirez-Franco J, Fronzaroli-Molinieres L, Boumedine-Guignon N, Ankri N, El Far O, Garrido JJ, Debanne D, Russier M. *The Journal of neuroscience : the official journal of the Society for Neuroscience* (2023) 4350: 8596-8606. . **IHC; tested species: mouse**

NMDA receptor-targeted enrichment of CaMKII α improves fear memory. Chifor A, Choi J, Park J. *iScience* (2022) 258: 104864. . **IHC; tested species: mouse**

DAPK1 Promotes Extrasynaptic GluN2B Phosphorylation and Striatal Spine Instability in the YAC128 Mouse Model of Huntington Disease. Schmidt ME, Caron NS, Aly AE, Lemarié FL, Dal Cengio L, Ko Y, Lazic N, Anderson L, Nguyen B, Raymond LA, Hayden MR, et al. *Frontiers in cellular neuroscience* (2020) 14: 590569. . **ICC; tested species: mouse**

Ca²⁺/calmodulin binding to PSD-95 mediates homeostatic synaptic scaling down. Chowdhury D, Turner M, Patriarchi T, Hergarden AC, Anderson D, Zhang Y, Sun J, Chen CY, Ames JB, Hell JW. *The EMBO journal* (2018) 371: 122-138. . **IP**

Revisiting adult neurogenesis and the role of erythropoietin for neuronal and oligodendroglial differentiation in the hippocampus. Hassouna I, Ott C, Wüstefeld L, Offen N, Neher RA, Mitkovski M, Winkler D, Sperling S, Fries L, Goebbels S, Vreja IC, et al. *Molecular psychiatry* (2016) 2112: 1752-1767. . **IHC**

The GTPase Rab26 links synaptic vesicles to the autophagy pathway. Binotti B, Pavlos NJ, Riedel D, Wenzel D, Vorbrüggen G, Schalk AM, Kühnel K, Boyken J, Erck C, Martens H, Chua JJ, et al. *eLife* (2015) 4: e05597. . **IP**

Bällchen is required for self-renewal of germline stem cells in *Drosophila melanogaster*. Herzig B, Yakulov TA, Klinge K, Günesdogan U, Jäckle H, Herzig A. *Biology open* (2014) 36: 510-21. . **ICC**

Morphological, biophysical and synaptic properties of glutamatergic neurons of the mouse spinal dorsal horn. Punnakkal P, von Schoultz C, Haenraets K, Wildner H, Zeilhofer HU. *The Journal of physiology* (2014) 5924: 759-76. . **IHC**

Titration of Syntaxin1 in mammalian synapses reveals multiple roles in vesicle docking, priming, and release probability. Arancillo M, Min SW, Gerber S, Münster-Wandowski A, Wu YJ, Herman M, Trimbuch T, Rah JC, Ahnert-Hilger G, Riedel D, Südhof TC, et al. *The Journal of neuroscience : the official journal of the Society for Neuroscience* (2013) 3342: 16698-714. . **ICC**

Oligodendrocyte dynamics in the healthy adult CNS: evidence for myelin remodeling. Young KM, Psachoulia K, Tripathi RB, Dunn SJ, Cossell L, Attwell D, Tohyama K, Richardson WD. *Neuron* (2013) 775: 873-85. . **IHC; tested species: mouse**

Selective regulation of NR2B by protein phosphatase-1 for the control of the NMDA receptor in neuroprotection. Farinelli M, Heitz FD, Grewe BF, Tyagarajan SK, Helmchen F, Mansuy IM. *PLoS one* (2012) 73: e34047. . **IHC**

FAQ - How should I store my antibody?

Shipping Conditions

- All our antibodies and control proteins / peptides are shipped lyophilized (vacuum freeze-dried) and are stable in this form without loss of quality at ambient temperatures for several weeks.

Storage of Sealed Vials after Delivery

- **Unlabeled** and **biotin-labeled antibodies** and **control proteins** should be stored at 4°C before reconstitution. **They must not be stored in the freezer when still lyophilized!** Temperatures below zero may cause loss of performance.
- **Fluorescence-labeled antibodies** should be reconstituted immediately upon receipt. Long term storage (several months) may lead to aggregation.
- **Control peptides** should be kept at -20°C before reconstitution.

Long Term Storage after Reconstitution (General Considerations)

- The storage freezer must not be of the frost-free variety ("no-frost freezer"). This cycle between freezing and thawing (to reduce frost-build-up), which is exactly what should be avoided. For the same reason, antibody vials should be placed in an area of the freezer that has minimal temperature fluctuations, for instance towards the back rather than on a door shelf.
- Aliquot the antibody and store frozen (-20°C to -80°C). Avoid very small aliquots (below 20 µl) and use the smallest storage vial or tube possible. The smaller the aliquot, the more the stock concentration is affected by evaporation and adsorption of the antibody to the surface of the storage vial or tube. Adsorption of the antibody to the surface leads to a substantial loss of activity.
- The addition of glycerol to a final concentration of 50% lowers the freezing point of your stock and keeps your antibody at -20°C in liquid state. This efficiently avoids freeze and thaw cycles.

Product Specific Hints for Storage

Control proteins / peptides

- Store at -20°C to -80°C.

Monoclonal Antibodies

- **Ascites** and **hybridoma supernatant** should be stored at -20°C up to -80°C. **Prolonged storage at 4°C is not recommended!** Unlike serum, ascites may contain proteases that will degrade the antibodies.
- **Purified IgG** should be stored at -20°C up to -80°C. Adding a carrier protein like BSA will increase long term stability. Many of our antibodies already contain carrier proteins. Please refer to the data-sheet for detailed information.

Polyclonal Antibodies

- **Crude antisera:** With anti-microbials added, they may be stored at 4°C. However, frozen storage (-20°C up to -80°C) is preferable.
- **Affinity purified antibodies:** Less robust than antisera. Storage at -20°C up to -80°C is recommended. Adding a carrier protein like BSA will increase long term stability. Most of our antibodies already contain carrier proteins. Please refer to the data-sheet for detailed information.

Fluorescence-labeled Antibodies

- Store as a liquid with 1 : 1 (v/v) glycerol at -20°C. Protect these antibodies from light exposure.

Avoid repeated freeze-thaw cycles for all antibodies!

FAQ - How should I reconstitute my antibody?

Reconstitution

- All our purified antibodies are lyophilized from PBS. To reconstitute the antibody in PBS, add the amount of deionized water given in the respective datasheet. If higher volumes are preferred, add water as mentioned above and then the desired amount of PBS and a stabilizing carrier protein (e.g. BSA) to a final concentration of 2%. Some of our antibodies already contain albumin. Take this into account when adding more carrier protein. For complete reconstitution, carefully remove the lid. After adding water, briefly vortex the solution. You can spin down the liquid by placing the vial into a 50 ml centrifugation tube filled with paper.
- If desired, add small amounts of azide or thimerosal to prevent microbial growth. This is especially recommended if you want to keep an aliquot a 4°C.
- After reconstitution of fluorescence-labeled antibodies, add 1 : 1 (v/v) glycerol to a final concentration of 50%. This lowers the freezing point of your stock and keeps your antibody in liquid state at -20°C.
- Glycerol may also be added to unlabeled primary antibodies. It is a suitable way to avoid freeze-thaw cycles.
- Please refer to our **tips and hints for subsequent storage** of reconstituted antibodies and control peptides and proteins.